[0017] The power management system can have a method for charging a first battery and a second battery. The method can determine a first voltage from the first battery; determine a second voltage from the second battery; route a first current from a first capacitor bank coupled to the first battery when the first voltage is less than a first full battery voltage; and route a second current from a second capacitor bank coupled to the second battery when the second voltage is less than a second full battery voltage. The method can charge a third capacitor bank from a first power source.

[0018] The power management system can have a method for charging a first battery and a second battery. The method can charge a first battery with a first capacitor bank; charge a second battery with a second capacitor bank; receive current from a power source to a third capacitor bank; and switch the third capacitor bank with the first capacitor bank when the first capacitor bank is less than an optimal capacitor voltage such that the first capacitor can receive current from the power source and the third capacitor bank can charge the first battery. The optimal capacitor voltage can be from about 0 V to about 2 V.

[0019] The power management system can have a method for charging a first battery and a second battery. The method can measure a first voltage from a first power source; measure a second voltage from a second power source; select the first power source or the second power source; receive a first current from the first power source or the second power source by a first capacitor bank; and discharge the current from the first capacitor bank to the first battery or the second battery. The receiving can occur in increments of 2.7 V. The system can select the first power source when the first voltage is greater than the second voltage. The system can manually select the first power source or the second power source by a user.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0020] FIG. **1** illustrates a variation of components in a portable power management system.

[0021] FIG. **2***a* illustrates a variation of a flowchart describing the method to charge and store energy of the portable power management system.

[0022] FIGS. **2***b* and **2***c* illustrate a variation of rotating the capacitor banks to charge the batteries.

[0023] FIG. **3***a* illustrates a variation of the method in which the power source is selected manually.

[0024] FIG. **3***b* illustrates a variation of the method in which the power source is selected automatically on the first battery charge block.

[0025] FIG. **3***c* illustrates a variation of the method in which the power source is selected automatically on the second battery charge block.

[0026] FIG. **4** illustrates a variation of the power source charging the battery.

[0027] FIG. **5** illustrates a variation of the physical connections of the capacitor banks.

[0028] FIG. **6***a* illustrates a variation of a logic table where the first battery can be fully charged and the second battery can have a low charge.

[0029] FIGS. **6***b* and **6***c* illustrate a variation of a method for charging the second battery while the first battery is not being charged.

[0030] FIG. **7***a* illustrates a variation of a logic table where the first battery can have a low charge and the second battery can be fully charged.

[0031] FIGS. **7***b* and **7***c* illustrate a variation of a method for charging the first battery while the second battery is not being charged.

[0032] FIG. **8***a* illustrates a variation of a logic table where the first battery can have a low charge and the second battery can have a low charge.

[0033] FIG. **8***b* illustrates a variation of a method for charging the first battery and the second battery.

[0034] FIG. **9***a* illustrates a variation of a logic table where the first battery can be fully charged and the second battery can be fully charged.

[0035] FIG. **9***b* illustrates a variation of a method for not charging the first battery and the second battery.

[0036] FIGS. **10***a* and **10***b* illustrate a variation of the flowchart and block diagram of the automatic temperature management circuit.

[0037] FIG. **11** illustrates a variation of the block diagram of the satellite navigation receiver.

DETAILED DESCRIPTION OF THE INVENTION

[0038] FIG. **1** illustrates that the power management system **100** can be a high availability (e.g., at least two or more batteries), GPS tracked power management system. The thin lines can represent connections between components. The thick arrows can represent current flow. The power management system **100** can be portable. The power management system **100** can have a power source, either a first power source **101***a* or a second power source **101***b*, a satellite navigation receiver **227**, a thermal control **225**, a cooling element **226**, a power switch block **224**, a first battery **206**, a second battery **213**, a first battery charge block **222**, a second battery charge block **223**, or any combination thereof.

[0039] The power management system **100** can have at least a first power source **101***a*, a second power source **101***b*, a third power source, a fourth power source, and/or a fifth power source (the third power source, the fourth power source, and/or the fifth power source are not shown in FIG. **1**). The first power source **101***a* and the second power source **101***b* can be connected (e.g., electrically connected, electrically connected such that current flows in one direction, electrically connected such that current flows in both directions, physically connected) to one another. The power source inputs can be 1.5 V DC, 2.7 V DC, 3 V DC, 3.3 V DC, 5 V DC, 6 V DC, 7.5 V DC, 9 V DC, 12 V DC, or any combination thereof. The combined input power for the power sources **101** can be between about 70 watts and about 100 watts. The first power source **101***a* and the second power source **101***b* can have different voltages. The first power source **101***a* and the second power source **101***b* can have the same voltages. The power source **101** can include car alternators, AC power, solar panels, wind turbines, other DC power sources, fixed lines, AC to DC converters from fixed lines, power generators, other alternative energy sources, or any combination thereof.

[0040] The satellite navigation receiver can be a global positioning system chip, a global positioning system receiver, a global positioning system transmitter, for example, global positioning system (GPS) transmitter **227**. The GPS transmitter **227** can be connected to a device **200**